



Wednesday, July 20, 2016

Heather Medley
CH2M HILL Plateau Remediation Company
2420 Stevens Center
Richland, WA 99352

Re: ALS Workorder: 1606562
Project Name: TEDF Generator Indicator Sampling - 28
Project Number: F16-055

Dear Ms. Medley:

One water sample was received from CH2M HILL Plateau Remediation Company, on 6/30/2016. The sample was scheduled for the following analysis:

Metals

The results for these analyses are contained in the enclosed reports.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Thank you for your confidence in ALS Environmental. Should you have any questions, please call.

Sincerely,

A handwritten signature in black ink, appearing to read 'Julie Ellingson', written over a light-colored background.

ALS Environmental
Julie Ellingson
Project Manager

ALS Environmental – Fort Collins is accredited by the following accreditation bodies for various testing scopes in accordance with requirements of each accreditation body. All testing is performed under the laboratory management system, which is maintained to meet these requirement and regulations. Please contact the laboratory or accreditation body for the current scope testing parameters.

ALS Environmental – Fort Collins	
Accreditation Body	License or Certification Number
AIHA	214884
Alaska (AK)	UST-086
Alaska (AK)	CO01099
Arizona (AZ)	AZ0742
California (CA)	06251CA
Colorado (CO)	CO01099
Connecticut (CT)	PH-0232
Florida (FL)	E87914
Idaho (ID)	CO01099
Kansas (KS)	E-10381
Kentucky (KY)	90137
L-A-B (DoD ELAP/ISO 170250)	L2257
Louisiana (LA)	05057
Maryland (MD)	285
Missouri (MO)	175
Nebraska(NE)	NE-OS-24-13
Nevada (NV)	CO000782008A
New York (NY)	12036
North Dakota (ND)	R-057
Oklahoma (OK)	1301
Pennsylvania (PA)	68-03116
Tennessee (TN)	2976
Texas (TX)	T104704241
Utah (UT)	CO01099
Washington (WA)	C1280

July 20, 2016

ALS1606562

ALS Environmental -- FC

Sample Number(s) Cross-Reference Table

OrderNum: 1606562

Client Name: CH2M HILL Plateau Remediation Company

Client Project Name: TEDF Generator Indicator Sampling - 28

Client Project Number: F16-055

Client PO Number: BOA 54854

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
B35WT5	1606562-1		WATER	29-Jun-16	8:40

20165

CH2M Hill Plateau Remediation Company
COLLECTOR CHRIS FULTON
CHPRC

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST
TELEPHONE NO. 373-6909
PROJECT COORDINATOR MEDLEY, HA

F16-055-002

PRICE CODE 7H
AIR QUALITY

DATA TURNAROUND
30 Days / 30 Days

SAMPLING LOCATION

TEDF Generator - 283-W (SL-47-P-04)

ICE CHEST NO.

605-452

SHIPPED TO

ALS Environmental Ft. Collins

PROJECT DESIGNATION

Treated Effluent Disposal Facility (TEDF) Generator Indicator Sampling - 28

FIELD LOGBOOK NO.

HNF-N-50734
OFFSITE PROPERTY NO. 6783

ACTUAL SAMPLE DEPTH

N/A

METHOD OF SHIPMENT

FEDERAL EXPRESS

ORIGINAL

BILL OF LADING/AIR BILL NO.

7766 3495 6289

MATRIX*
A=Air
DL=Drum
Liquids
DS=Drum
Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegetation
W=Water
WI=Wipe
X=Other

HNO3 to pH <2
6 Months
G/P
1
500ml
SEE ITEM (1) IN SPECIAL INSTRUCTIONS

POSSIBLE SAMPLE HAZARDS/ REMARKS
*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order-458.1. NA

SPECIAL HANDLING AND/OR STORAGE

NO. OF CONTAINER(S)

VOLUME

SAMPLE ANALYSIS

SAMPLE NO.

B35WT5 ①

MATRIX*

WATER

SAMPLE DATE

JUN 29 2016 0840



CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM
CHRIS FULTON
CHPRC

DATE/TIME JUN 29 2016 0855

RECEIVED BY/STORED IN
Janelle Zunker
CHPRC

DATE/TIME JUN 29 2016 0855

Flow: N/A
pH: 8.11
Conductivity: 172.4

WESF POC (liquid effluent and cooling water) is Dave Watson, 509-373-4405
Sum Camp 509-372-0175

SPECIAL INSTRUCTIONS

Samplers: obtain field data from generator:

DATE/TIME JUN 29 2016 0900

RECEIVED BY/STORED IN
Fedex

DATE/TIME JUN 29 2016 0900

RELINQUISHED BY/REMOVED FROM
Fedex

DATE/TIME JUN 29 2016 0900

RECEIVED BY/STORED IN
Rebecca Mervig

DATE/TIME JUN 29 2016 0900

RELINQUISHED BY/REMOVED FROM

DATE/TIME JUN 29 2016 0900

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DATE/TIME JUN 29 2016 0900

RECEIVED BY/STORED IN



ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: CHPRC

Workorder No: 1606562

Project Manager: JE

Initials: RM Date: 6/30/16

1. Does this project require any special handling in addition to standard ALS procedures?		YES	<input checked="" type="radio"/> NO
2. Are custody seals on shipping containers intact?	NONE	<input checked="" type="radio"/> YES	NO
3. Are Custody seals on sample containers intact?	NONE	<input checked="" type="radio"/> YES	NO
4. Is there a COC (Chain-of-Custody) present or other representative documents?		<input checked="" type="radio"/> YES	NO
5. Are the COC and bottle labels complete and legible?		<input checked="" type="radio"/> YES	NO
6. Is the COC in agreement with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		<input checked="" type="radio"/> YES	NO
7. Were airbills / shipping documents present and/or removable?	DROP OFF	<input checked="" type="radio"/> YES	NO
8. Are all aqueous samples requiring preservation preserved correctly? (excluding volatiles)	N/A	<input checked="" type="radio"/> YES	NO
9. Are all aqueous non-preserved samples pH 4-9?	<input checked="" type="radio"/> N/A	<input checked="" type="radio"/> YES	NO
10. Is there sufficient sample for the requested analyses?		<input checked="" type="radio"/> YES	NO
11. Were all samples placed in the proper containers for the requested analyses?		<input checked="" type="radio"/> YES	NO
12. Are all samples within holding times for the requested analyses?		<input checked="" type="radio"/> YES	NO
13. Were all sample containers received intact? (not broken or leaking, etc.)		<input checked="" type="radio"/> YES	NO
14. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, Rx CN/S, radon) headspace free? Size of bubble: ___ < green pea ___ > green pea	<input checked="" type="radio"/> N/A	YES	NO
15. Do any water samples contain sediment? Amount Amount of sediment: ___ dusting ___ moderate ___ heavy	N/A	YES	<input checked="" type="radio"/> NO
16. Were the samples shipped on ice?		<input checked="" type="radio"/> YES	NO
17. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: #2 <input checked="" type="radio"/> #4		<input checked="" type="radio"/> YES	NO
Cooler #: <u>1</u>			
Temperature (°C): <u>4.4°C</u>			
No. of custody seals on cooler: <u>2</u>			
External µR/hr reading: <u>12</u>			
Background µR/hr reading: <u>10</u>			
Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? <input checked="" type="radio"/> YES <input type="radio"/> NO <input type="radio"/> NA (If no, see Form 008.)			

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16.

If applicable, was the client contacted? YES / NO / NA Contact: _____ Date/Time: _____

Project Manager Signature / Date: [Signature] 6/30/16

1606562

ORIGIN ID: PSCA (509) 373-3580
JANELLE ZUNKER
CH2M
6289 LATAH ST.
RICHLAND, WA 99354
UNITED STATES US

SHIP DATE: 29 JUN 16
ACT WGT: 20.00 LB
CAD: 1070660571NET3730

BILL THIRD PARTY

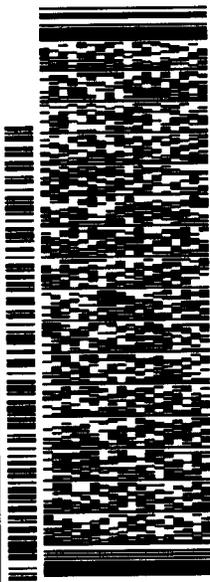
TO JULIE ELLINGSON
ALS GLOBAL
225 COMMERCE DRIVE

4.40c 12
-2

FORT COLLINS CO 80524 REF: 6783
(970) 490-1511
INV PO:

540J16C8D/7ZF

DEPT:



THU - 30 JUN 10:30A

PRIORITY OVERNIGHT

TRK# 7766 3495 6289

DSR

80524

XH FTCA

CO-US

DEN



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Metals Case Narrative

CH2M HILL Plateau Remediation Company TEDF Generator Indicator Sampling – 28 – F16-055

Work Order Number: 1606562

1. This report consists of 1 water sample.
2. The sample was received cool and intact by ALS on 06/30/16.
3. The sample had a pH less than 2 upon receipt.
4. The sample was prepared and analyzed based on SW-846, 3rd Edition procedures.

For analysis by Trace ICP and ICP-MS, the sample was digested following method 3005A and the current revision of SOP 806.

For analysis by Cold Vapor AA (CVAA), the sample was digested following method 7470A and the current revision of SOP 812.

5. Analysis by Trace ICP followed method 6010B and the current revision of SOP 834.

Analysis by ICP-MS followed method 6020A and the current revision of SOP 827.

Analysis by CVAA followed method 7470A and the current revision of SOP 812.

6. All standards and solutions are NIST traceable and were used within their recommended shelf life.
7. The sample was prepared and analyzed within the established hold times.

All in house quality control procedures were followed, as described below.

8. General quality control procedures.



- A preparation (method) blank and laboratory control sample were digested and analyzed with the samples in each digestion batch.
- The preparation (method) blank associated with each digestion batch was below the reporting limit for the requested analytes. Iron and silicon have results above the MDL. Sample results have been compared to the blank results.
- All laboratory control sample criteria were met.
- All initial and continuing calibration blanks were below the reporting limit for the requested analytes.
- All initial and continuing calibration verifications were within the acceptance criteria for the requested analytes.
- The interference check samples and high standard readbacks associated with Method 6010B were within acceptance criteria.
- The interference check samples associated with Method 6020A were analyzed.

9. Matrix specific quality control procedures.

Sample 1606562-1 was designated as the quality control sample for each analysis.

Similarity of matrix and therefore relevance of the QC results should not be automatically inferred for any sample other than the native sample selected for QC.

- A matrix spike and matrix spike duplicate were digested and analyzed with each batch. All acceptance criteria for accuracy were met.
- A serial dilution was analyzed with each ICP batch. All acceptance criteria were met with the following exception:

<u>Analyte</u>	<u>Sample ID</u>
Barium	1606562-1L

The native sample result is flagged for serial dilution failure.

10. It is a standard practice that samples for ICP-MS are analyzed at a dilution. The 10X factor can be considered an artifact of the prep and does not indicate a secondary dilution and is therefore not flagged as a dilution.



The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Jill Latelle
Jill Latelle
Inorganics Primary Data Reviewer

7/15/16
Date

Julie Elliza
Inorganics Final Data Reviewer

7/20/16
Date



Inorganic Data Reporting Qualifiers

The following qualifiers are used as needed by the laboratory when reporting results of inorganic analyses.

- Result qualifier -- A "B" is entered if the reported value was obtained from a reading that was less than the Reporting Limit but greater than or equal to the Method Detection Limit (MDL). If the analyte was analyzed for but not detected a "U" is entered. For samples, negative values are reported as non-detects ("U" flagged). For blanks, if the absolute value of the negative value is above the MDL and below the reporting limit, then the result is "B" flagged.
- QC qualifier -- Specified entries and their meanings are as follows:
 - E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.
 - M - Duplicate injection precision was not met.
 - N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.
 - Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.
 - * - Duplicate analysis (relative percent difference) not within control limits.
 - S - SAR value is estimated as one or more analytes used in the calculation were not detected above the detection limit.
 - C - The analyte was detected in both the sample and the associated QC blank, and the sample concentration was $\leq 20X$ the blank concentration.
 - D - Analyte was reported at a secondary dilution factor, typically $DF > 1$ (i.e., the primary preparation required dilution to either bring the analyte within the calibration range or to minimize interference). Required for organics/wetchem if the sample was diluted.

Total Recoverable ICP Metals

Method SW6010B

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1606562

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: TEDF Generator Indicator Sampling - 28 F16-055

Field ID: B35WT5

Lab ID: 1606562-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 29-Jun-16

Date Extracted: 11-Jul-16

Date Analyzed: 13-Jul-16

Prep Method: SW3005 Rev A

Prep Batch: IP160711-4

QCBatchID: IP160711-4-1

Run ID: IP160713-1A3

Cleanup: NONE

Basis: As Received

File Name:

Analyst: Nathan A. Quatier

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

Clean DF: 1

Analysis ReqCode: 6010_METALS_I

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
7440-70-2	CALCIUM	1	19000	1000	51		
7439-89-6	IRON	1	34	50	16	BC	
7439-95-4	MAGNESIUM	1	4100	750	58		
7440-09-7	POTASSIUM	1	960	1000	86	B	
7440-21-3	SILICON	1	2700	50	29		
7440-23-5	SODIUM	1	2800	500	61		
7440-62-2	VANADIUM	1	2	10	2	U	

Data Package ID: ip1606562-1

Total Recoverable ICPMS Metals

Method SW6020A

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1606562

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: TEDF Generator Indicator Sampling - 28 F16-055

Field ID: B35WT5

Lab ID: 1606562-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 29-Jun-16

Date Extracted: 11-Jul-16

Date Analyzed: 13-Jul-16

Prep Method: SW3005 Rev A

Prep Batch: IP160711-4

QCBatchID: IP160711-4-2

Run ID: IM160713-11A5

Cleanup: NONE

Basis: As Received

File Name: 113SMPL_

Analyst: Brent A. Stanfield

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

Clean DF: 1

Analysis ReqCode: 6020_METALS_I

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	10	410	100	14	C	
7440-38-2	ARSENIC	10	0.23	2	0.18	B	
7440-39-3	BARIUM	10	26	5	0.23		E
7440-41-7	BERYLLIUM	10	0.27	0.5	0.27	U	
7440-43-9	CADMIUM	10	0.099	2	0.099	U	
7440-47-3	CHROMIUM	10	1.1	10	1.1	U	
7440-48-4	COBALT	10	0.07	5	0.07	B	
7439-92-1	LEAD	10	0.31	2	0.16	B	
7439-96-5	MANGANESE	10	6.3	5	0.3		
7440-02-0	NICKEL	10	4.2	20	4.2	U	
7440-22-4	SILVER	10	0.039	0.5	0.039	U	
7440-28-0	THALLIUM	10	0.04	0.1	0.014	BC	
7440-66-6	ZINC	10	20	100	9.1	B	

Data Package ID: im1606562-1

July 20, 2016

ALS1606562

Total Mercury

Method SW7470A

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1606562

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: TEDF Generator Indicator Sampling - 28 F16-055

Field ID: B35WT5

Lab ID: 1606562-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 29-Jun-16

Date Extracted: 05-Jul-16

Date Analyzed: 05-Jul-16

Prep Method: METHOD

Prep Batch: HG160705-2

QCBatchID: HG160705-2-1

Run ID: HG160705-1A2

Cleanup: NONE

Basis: As Received

File Name: HG160705-1

Analyst: Nathan A. Quatier

Sample Aliquot: 10 ml

Final Volume: 10 ml

Result Units: UG/L

Clean DF: 1

Analysis ReqCode: 7470_MERCURY

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
7439-97-6	MERCURY	1	0.06	0.2	0.06	U	

Data Package ID: HG1606562-1

Date Printed: Friday, July 15, 2016

ALS Environmental -- FC

Page 1 of 1

LIMS Version: 6.820

July 20, 2016

ALS1606562

ICP Metals

Method SW6010B

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1606562

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: TEDF Generator Indicator Sampling - 28 F16-055

Lab ID: IP160711-4MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 11-Jul-16

Date Analyzed: 13-Jul-16

Prep Batch: IP160711-4

QCBatchID: IP160711-4-1

Run ID: IP160713-1A3

Cleanup: NONE

Basis: N/A

File Name:

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	DF	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
7440-70-2	CALCIUM	1	51	1000	51	U	
7439-89-6	IRON	1	24	50	16	B	
7439-95-4	MAGNESIUM	1	58	750	58	U	
7440-09-7	POTASSIUM	1	86	1000	86	U	
7440-21-3	SILICON	1	32	50	29	B	
7440-23-5	SODIUM	1	61	500	61	U	
7440-62-2	VANADIUM	1	2	10	2	U	

Data Package ID: ip1606562-1

July 20, 2016

ALS1606562

ICP Metals

Method SW6010B

Laboratory Control Sample

Lab Name: ALS Environmental -- FC

Work Order Number: 1606562

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: TEDF Generator Indicator Sampling - 28 F16-055

Lab ID: IP160711-4LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 07/11/2016

Date Analyzed: 07/13/2016

Prep Method: SW3005A

Prep Batch: IP160711-4

QC Batch ID: IP160711-4-1

Run ID: IP160713-1A3

Cleanup: NONE

Basis: N/A

File Name:

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
7440-70-2	CALCIUM	40000	39800	1000		100	80 - 120%
7439-89-6	IRON	1000	1040	50		104	80 - 120%
7439-95-4	MAGNESIUM	40000	41600	750		104	80 - 120%
7440-09-7	POTASSIUM	40000	40500	1000		101	80 - 120%
7440-21-3	SILICON	1000	1020	50		102	80 - 120%
7440-23-5	SODIUM	40000	40700	500		102	80 - 120%
7440-62-2	VANADIUM	500	525	10		105	80 - 120%

Data Package ID: ip1606562-1

July 20, 2016

ALS1606562

ICP Metals

Method SW6010B

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1606562

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: TEDF Generator Indicator Sampling - 28 F16-055

Field ID: B35WT5
LabID: 1606562-1MS

Sample Matrix: WATER
 % Moisture: N/A
 Date Collected: 29-Jun-16
 Date Extracted: 11-Jul-16
 Date Analyzed: 13-Jul-16
 Prep Method: SW3005 Rev A

Prep Batch: IP160711-4
 QCBatchID: IP160711-4-1
 Run ID: IP160713-1A3
 Cleanup: NONE
 Basis: As Received

Sample Aliquot: 50 ml
 Final Volume: 50 ml
 Result Units: UG/L
 File Name:

CASNO	Target Analyte	Sample Result	Samp Qual	MS Result	MS Qual	Reporting Limit	Spike Added	MS % Rec.	Control Limits
7440-70-2	CALCIUM	19000		58000		1000	40000	97	80 - 120%
7439-89-6	IRON	34	BC	1070		50	1000	103	80 - 120%
7439-95-4	MAGNESIUM	4100		43400		750	40000	98	80 - 120%
7440-09-7	POTASSIUM	960	B	42000		1000	40000	103	80 - 120%
7440-21-3	SILICON	2700		3700		50	1000	103	80 - 120%
7440-23-5	SODIUM	2800		43900		500	40000	103	80 - 120%
7440-62-2	VANADIUM	2	U	516		10	500	103	80 - 120%

Field ID: B35WT5
LabID: 1606562-1MSD

Sample Matrix: WATER
 % Moisture: N/A
 Date Collected: 29-Jun-16
 Date Extracted: 11-Jul-16
 Date Analyzed: 13-Jul-16
 Prep Method: SW3005 Rev A

Prep Batch: IP160711-4
 QCBatchID: IP160711-4-1
 Run ID: IP160713-1A3
 Cleanup: NONE
 Basis: As Received

Sample Aliquot: 50 ml
 Final Volume: 50 ml
 Result Units: UG/L
 File Name:

CASNO	Target Analyte	MSD Result	MSD Qual	Spike Added	MSD % Rec.	Reporting Limit	RPD Limit	RPD
7440-70-2	CALCIUM	57900		40000	97	1000	20	0
7439-89-6	IRON	1060		1000	103	50	20	1
7439-95-4	MAGNESIUM	43400		40000	98	750	20	0
7440-09-7	POTASSIUM	41900		40000	102	1000	20	0
7440-21-3	SILICON	3720		1000	105	50	20	1
7440-23-5	SODIUM	43900		40000	103	500	20	0
7440-62-2	VANADIUM	514		500	103	10	20	0

Data Package ID: ip1606562-1

July 20, 2016

ALS1606562

ICPMS Metals

Method SW6020A

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1606562

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: TEDF Generator Indicator Sampling - 28 F16-055

Lab ID: IP160711-4MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 11-Jul-16

Date Analyzed: 13-Jul-16

Prep Batch: IP160711-4

QCBatchID: IP160711-4-2

Run ID: IM160713-11A5

Cleanup: NONE

Basis: N/A

File Name: 111SMPL_

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	DF	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	10	91	100	14	B	
7440-39-3	BARIUM	10	0.23	5	0.23	U	
7440-41-7	BERYLLIUM	10	0.27	0.5	0.27	U	
7440-43-9	CADMIUM	10	0.099	2	0.099	U	
7440-47-3	CHROMIUM	10	1.1	10	1.1	U	
7440-48-4	COBALT	10	0.07	5	0.07	U	
7439-92-1	LEAD	10	0.16	2	0.16	U	
7439-96-5	MANGANESE	10	0.3	5	0.3	U	
7440-02-0	NICKEL	10	4.2	20	4.2	U	
7440-22-4	SILVER	10	0.039	0.5	0.039	U	
7440-28-0	THALLIUM	10	0.02	0.1	0.014	B	
7440-66-6	ZINC	10	9.1	100	9.1	U	

Data Package ID: im1606562-1

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ALS1606562

ICPMS Metals

Method SW6020A

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1606562

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: TEDF Generator Indicator Sampling - 28 F16-055

Lab ID: IP160711-4MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 11-Jul-16

Date Analyzed: 14-Jul-16

Prep Batch: IP160711-4

QCBatchID: IP160711-4-2

Run ID: IM160714-10A3

Cleanup: NONE

Basis: N/A

File Name: 034SMPL_

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	DF	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
7440-38-2	ARSENIC	10	0.18	2	0.18	U	

Data Package ID: *im1606562-1*

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ALS1606562

ICPMS Metals

Method SW6020A

Laboratory Control Sample

Lab Name: ALS Environmental -- FC

Work Order Number: 1606562

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: TEDF Generator Indicator Sampling - 28 F16-055

Lab ID: IM160711-4LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 07/11/2016

Date Analyzed: 07/13/2016

Prep Method: SW3005A

Prep Batch: IP160711-4

QCBatchID: IP160711-4-2

Run ID: IM160713-11A5

Cleanup: NONE

Basis: N/A

File Name: 112SMPL_

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
7429-90-5	ALUMINIUM	5000	4650	100		93	80 - 120%
7440-38-2	ARSENIC	100	106	2		106	80 - 120%
7440-39-3	BARIUM	100	99.6	5		100	80 - 120%
7440-41-7	BERYLLIUM	50	47.2	0.5		95	80 - 120%
7440-43-9	CADMIUM	30	28.7	2		96	80 - 120%
7440-47-3	CHROMIUM	500	469	10		94	80 - 120%
7440-48-4	COBALT	100	96.1	5		96	80 - 120%
7439-92-1	LEAD	50	50	2		100	80 - 120%
7439-96-5	MANGANESE	100	95.2	5		95	80 - 120%
7440-02-0	NICKEL	500	473	20		95	80 - 120%
7440-22-4	SILVER	10	10	0.5		100	80 - 120%
7440-28-0	THALLIUM	2	1.99	0.1		100	80 - 120%
7440-66-6	ZINC	2000	1900	100		95	80 - 120%

Data Package ID: im1606562-1

July 20, 2016

ALS1606562

ICPMS Metals

Method SW6020A

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1606562

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: TEDF Generator Indicator Sampling - 28 F16-055

Field ID: B35WT5	Sample Matrix: WATER	Prep Batch: IP160711-4	Sample Aliquot: 50 ml
LabID: 1606562-1MS	% Moisture: N/A	QCBatchID: IP160711-4-2	Final Volume: 50 ml
	Date Collected: 29-Jun-16	Run ID: IM160713-11A5	Result Units: UG/L
	Date Extracted: 11-Jul-16	Cleanup: NONE	File Name: 116SMPL_
	Date Analyzed: 13-Jul-16	Basis: As Received	
	Prep Method: SW3005 Rev A		

CASNO	Target Analyte	Sample Result	Samp Qual	MS Result	MS Qual	Reporting Limit	Spike Added	MS % Rec.	Control Limits
7429-90-5	ALUMINUM	410	C	4880		100	5000	89	75 - 125%
7440-38-2	ARSENIC	0.23	B	105		2	100	105	75 - 125%
7440-39-3	BARIUM	26		130		5	100	104	75 - 125%
7440-41-7	BERYLLIUM	0.27	U	48.2		0.5	50	96	75 - 125%
7440-43-9	CADMIUM	0.099	U	28.3		2	30	94	75 - 125%
7440-47-3	CHROMIUM	1.1	U	457		10	500	91	75 - 125%
7440-48-4	COBALT	0.07	B	93.3		5	100	93	75 - 125%
7439-92-1	LEAD	0.31	B	48.6		2	50	97	75 - 125%
7439-96-5	MANGANESE	6.3		102		5	100	96	75 - 125%
7440-02-0	NICKEL	4.2	U	463		20	500	93	75 - 125%
7440-22-4	SILVER	0.039	U	9.57		0.5	10	96	75 - 125%
7440-28-0	THALLIUM	0.04	BC	1.99		0.1	2	98	75 - 125%
7440-66-6	ZINC	20	B	2130		100	2000	105	75 - 125%

Data Package ID: im1606562-1

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ALS1606562

ICPMS Metals

Method SW6020A

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1606562

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: TEDF Generator Indicator Sampling - 28 F16-055

Field ID: B35WT5

LabID: 1606562-1MSD

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 29-Jun-16

Date Extracted: 11-Jul-16

Date Analyzed: 13-Jul-16

Prep Method: SW3005 Rev A

Prep Batch: IP160711-4

QCBatchID: IP160711-4-2

Run ID: IM160713-11A5

Cleanup: NONE

Basis: As Received

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: UG/L

File Name: 117SMPL_

CASNO	Target Analyte	MSD Result	MSD Qual	Spike Added	MSD % Rec.	Reporting Limit	RPD Limit	RPD
7429-90-5	ALUMINUM	4960		5000	91	100	20	2
7440-38-2	ARSENIC	105		100	105	2	20	0
7440-39-3	BARIUM	128		100	102	5	20	2
7440-41-7	BERYLLIUM	50		50	100	0.5	20	4
7440-43-9	CADMIUM	28.2		30	94	2	20	0
7440-47-3	CHROMIUM	467		500	93	10	20	2
7440-48-4	COBALT	96		100	96	5	20	3
7439-92-1	LEAD	50.7		50	101	2	20	4
7439-96-5	MANGANESE	102		100	96	5	20	0
7440-02-0	NICKEL	469		500	94	20	20	1
7440-22-4	SILVER	9.9		10	99	0.5	20	3
7440-28-0	THALLIUM	2.02		2	99	0.1	20	1
7440-66-6	ZINC	1910		2000	95	100	20	11

Data Package ID: im1606562-1

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ALS1606562

Mercury

Method SW7470A

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1606562

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: TEDF Generator Indicator Sampling - 28 F16-055

Lab ID: HG160705-2MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 05-Jul-16

Date Analyzed: 05-Jul-16

Prep Batch: HG160705-2

QCBatchID: HG160705-2-1

Run ID: HG160705-1A2

Cleanup: NONE

Basis: N/A

File Name: HG160705-1

Sample Aliquot: 10 ml

Final Volume: 10 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	DF	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
7439-97-6	MERCURY	1	0.06	0.2	0.06	U	

Data Package ID: HG1606562-1

July 20, 2016

ALS1606562

Mercury

Method SW7470A

Laboratory Control Sample

Lab Name: ALS Environmental -- FC

Work Order Number: 1606562

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: TEDF Generator Indicator Sampling - 28 F16-055

Lab ID: HG160705-2LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 07/05/2016

Date Analyzed: 07/05/2016

Prep Method: METHOD

Prep Batch: HG160705-2

QCBatchID: HG160705-2-1

Run ID: HG160705-1A2

Cleanup: NONE

Basis: N/A

File Name: HG160705-1

Sample Aliquot: 10 ml

Final Volume: 10 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
7439-97-6	MERCURY	1	0.977	0.2		98	80 - 120%

Data Package ID: HG1606562-1

Date Printed: Friday, July 15, 2016

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ALS1606562

Mercury

Method SW7470A

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1606562

Client Name: CH2M HILL Plateau Remediation Company

ClientProject ID: TEDF Generator Indicator Sampling - 28 F16-055

Field ID: B35WT5
LabID: 1606562-1MS

Sample Matrix: WATER
 % Moisture: N/A
 Date Collected: 29-Jun-16
 Date Extracted: 05-Jul-16
 Date Analyzed: 05-Jul-16
 Prep Method: METHOD

Prep Batch: HG160705-2
 QCBatchID: HG160705-2-1
 Run ID: HG160705-1A2
 Cleanup: NONE
 Basis: As Received

Sample Aliquot: 10 ml
 Final Volume: 10 ml
 Result Units: UG/L
 File Name: HG160705-1

CASNO	Target Analyte	Sample Result	Samp Qual	MS Result	MS Qual	Reporting Limit	Spike Added	MS % Rec.	Control Limits
7439-97-6	MERCURY	0.06	U	1.93		0.2	2	97	80 - 120%

Field ID: B35WT5
LabID: 1606562-1MSD

Sample Matrix: WATER
 % Moisture: N/A
 Date Collected: 29-Jun-16
 Date Extracted: 05-Jul-16
 Date Analyzed: 05-Jul-16
 Prep Method: METHOD

Prep Batch: HG160705-2
 QCBatchID: HG160705-2-1
 Run ID: HG160705-1A2
 Cleanup: NONE
 Basis: As Received

Sample Aliquot: 10 ml
 Final Volume: 10 ml
 Result Units: UG/L
 File Name: HG160705-1

CASNO	Target Analyte	MSD Result	MSD Qual	Spike Added	MSD % Rec.	Reporting Limit	RPD Limit	RPD
7439-97-6	MERCURY	1.96		2	98	0.2	20	1

Data Package ID: HG1606562-1